

REMARKS/ARGUMENTS

The present Amendment is in response to the Office Action issued September 22, 2004. Claims 1-37 are pending in the present Application. Claims 35-37 are withdrawn from consideration. Claims 1-4, 10, 11 and 14-34 are rejected. Claims 5-9, 12 and 13 are objected to. Claims 1, 2, 5, 14 and 30 have been amended for clarification. New claims 38-45 have been added to further define the scope and novelty of the invention. Accordingly, claims 1-34 and 38-45 remain pending in the present application.

Applicant includes a Petition for Extension of Time to extend the deadline for filing a response by one (1) month from December 22, 2004 to January 22, 2005.

For the reason set forth more fully below, Applicant respectfully submits that the claims as presented are allowable. Consequently, reconsideration, allowance and passage to issue are respectfully requested.

Claim Objections

The Examiner states,

2. Claims 5-9 and 12-13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims. See MPEP 608.01(n). Accordingly, the claims 5-9 and 12-13 not been further treated on the merits.

Regarding the claim objections to claims 5-9 and 12-13, since claims 5, 8 and 12 were amended on the preliminary amendment filed on December 13, 2001 to eliminate multiple claim dependency, the objections should be withdrawn.

Claim Rejections – 35 USC 103

The Examiner states,

4. Claims 1-4, 10-11, and 14-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tolles et al (6220942) in view of Cosmano et al (5454750).

- a. Tolles et al disclose the claimed invention except for a ceramic or carbide ceramic.
- b. Cosmano et al discloses a polishing system that uses a carbide ceramic or ceramic material which are use to form abrasive pads.
- c. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Tolles et al device by providing a material such as a ceramic or carbide ceramic as taught by Cosmano et al which are use to form abrasive pads.
- d. Tolles et al disclose the claimed invention except for a ceramic or carbide ceramic material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a ceramic or carbide ceramic material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin, 125 USPQ 416.*
- e. Tolles et al discloses the claimed invention except for grooves with depth range of $1/3$ to $1/2$ of thickness. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have grooves with depth range of $1/3$ to $1/2$ of thickness, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*
- f. Tolles et al discloses the claimed invention except for a young's modulus of each base being between 1.0 to 5.0/kgcm²(x10 to the sixth). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a young's modulus of each base being between 1.0 to 5.0kg/cm² (x10 to the sixth),, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*
- g. Tolles et al discloses the claimed invention except for a thermal expansion coefficient of each base being in a range of 1.0x10 (to the sixth)/degrees and 8x10(to the sixth) It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a thermal expansion coefficient of each base being in a range of 1.0x10 (to the sixth)/degrees and 8x10(to the sixth), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*
- h. Tolles et al discloses the claimed invention except for a brazing layer having titanium being a weight of .1 to 10 percent of the weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a brazing layer having titanium being a weight of .1 to 10 percent of the weight since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*
- i. Tolles et al discloses the claimed invention except for an adhesive layer with a thickness of 10 to 50 micrometers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an adhesive layer with a thickness of 10 to 50 micrometers, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

Claims 1-4, 10-11 and 14-34 were rejected as being unpatentable over Tolles et al. (U.S. Patent No. 6,220,942 hereinafter “Tolles”) in view of Cosmano et al. (U.S. Patent No. 5,454,750 hereinafter “Cosmano”). Applicants traverse this rejection.

Claims 1 and 2

Tolles does not disclose that the density of each base is at least 2.7g/cm^3 . Rather, Tolles discloses a CMP system including a pad 44 and a rotatable platen 41 attached to the lower surface of the pad 44 and including a plurality of grooves 62. In the present invention, since the density of each base is at least 2.7g/cm^3 , crystal particles in each base are strongly bonded and the number of pores is extremely small. Therefore, anti-corrosion and anti-abrasion characteristics are secured. Furthermore, the rigidity of the table is not lowered, thereby preventing cracking from being generated at the corner of the fluid passage or groove.

Cosmano does not disclose that the density of each base is at least 2.7g/cm^3 and at least one of the bases has a fluid passage formed in its superimposition interface. Rather, Cosmano discloses coated abrasive material formed on the backing 12. Accordingly, we believe that the present invention is not obvious over Tolles in view of Cosmano.

Claims 3-29

Claims 3-29 are allowable since they depend from an allowable base claim.

Claim 30

Neither Tolles nor Cosmano discloses that a table is formed of a material, the Young's modulus of which is at least $1.0\text{kg/cm}^2(\times 10^6)$. Accordingly, we believe that the present invention is not obvious over Tolles in view of Cosmano.

Claims 31-34

Claims 31-34 are allowable because they depend from an allowable base claim.

New claims

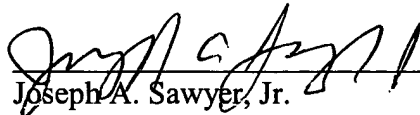
New claims 38-45 further define the scope and novelty of the present invention and are further allowable because they depend from an allowable base claim.

Accordingly, Applicant respectfully submits that claims 1-34 and 38-45 are now all in allowable form. Consequently, allowance and passage to issue of claims 1-34 and 38-45 of the present application are respectfully requested.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,
SAWYER LAW GROUP LLP

January 5, 2005
Date



Joseph A. Sawyer, Jr.
Attorney for Applicant(s)
Reg. No. 30,801
(650) 493-4540